Work Order ID 111586

January-15-14 1:18:51 PM

111586

Item ID: D2199-1 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Struts, 19"

Start Date: 1/15/14 **Start Qty:** 2.00 *2*

Required Date: 1/31/14 **Req'd Qty:** 2.00 *2*

Reference:

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** MLJ **Date:** 1-01-17 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr: D2199	Revision Nbr: Rev E1								
100		0.00							DAS 30 9-89
100	NC BRAKE					2			14/06/10
Brake NC	**Memo**	0.00							
Brake NC	Punch per Dwg. D2199 and Spec Control Dwg D2638								
110		0.00							DAS 36 9-89
110	Small Fab					2K			14/06/26
Small Fab	**Memo**	0.00							
Small Fab	Deburr								
120	QC5- Inspect part completeness to step on W/O	0.00				2			DAS 27 9-89
120									14/06/26
QC	**Memo**	0.00							
Quality Control									

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

Work Order ID 111586

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Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel	0.00				2 ϕ	14-1-2.		DAS 34 9-89
130	M128959.								
Powdercoat	**Memo**	0.00							
Powder Coating	START TIME: 10:25 OVEN TEMPERATURE: 400 FINISH TIME: 10:55								
140	QC3- Inspect Part Finish	0.00				(2)			DAS 27 9-89
140	SB 14/07/02								
QC	**Memo**	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: ST	0.00				2X			DAS 28 9-89 JUL 02 2014
150									
Packaging	**Memo**	0.00							
Packaging									

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

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- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Crosstube ☐
- Water Jet ☐
- Engineering ☐
- Machining ☐
- Small Fab ☐
- Prod. Eng. Coor. ☐
- Quality ☐
- Thermoforming ☐
- Finishing ☐
- Rec/Store/Packaging ☐
- Other ☐
- Large Fab ☐
- Composite ☐
- Supplier ☐
- ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

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- ☐ Turning Sequence
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General

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- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

Work Order ID 111586 *111586*

January-15-14 1:18:51 PM

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Item Name: Struts, 19"

Start Date: 1/15/14 **Start Qty:** 2.00 *2* **Cust Item ID:**

Required Date: 1/31/14 **Req'd Qty:** 2.00 *2* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop** *NR2*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	**Memo**	0.00							
Quality Control									

14/07/03

14-7-2

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐
- ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

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- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

Picklist Print

January-15-14 1:18:50 PM

Work Order ID: 111586

Parent Item: D2199-1 **Start Date:** 1/15/14 **Required Date:** 1/31/14

Parent Item Name: Struts, 19" **Start Qty:** 2.00 **Required Qty:** 2.00

Comments: IPP B02.06.10Added finish NG/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.750W.049		Purchased	No			100	f	163.0800	1.55	**3.2631578**			
304 RD Tube .750 x .049W													

DAS 30 9-89

14 06 10

Location	Loc Qty	Loc Code	
MAT017	163.08		
122312	11		
124768	49.27		
M126183	102.81		

M 129187

5

DQA: _____ Date: _____

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WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

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Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
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- ☐ Ripples in Bend
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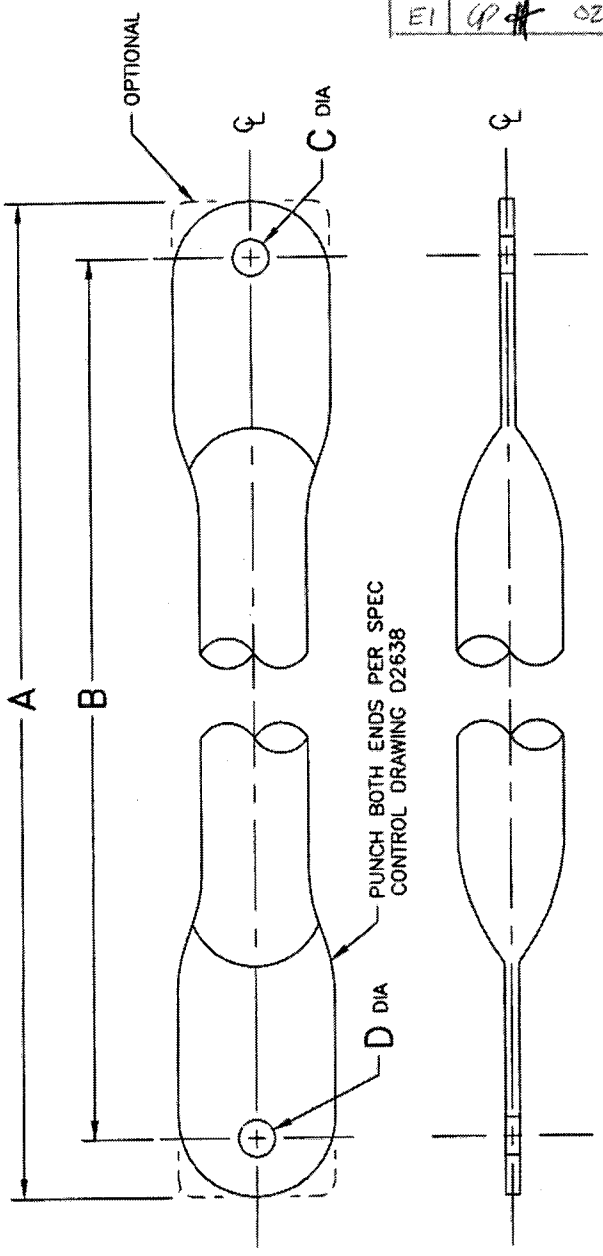
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DESIGN	DRAWN BY KE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D2199	REV. E SHEET 1 OF 1
DATE 98.04.28		TITLE STRUT DETAILS	SCALE NTS

A	1993	NEW ISSUE
B		ADDED −11, −13, AND −15
C		ADDED −17 AND −19
D		ADDED −21
E	98.04.28	ADDED −23 AND −25 PER TSR A565M ADDED TEMPLATE & SPEC CTRL DWG REDRAWN IN CAD
E1	GP 02.03.22	ADD FINISH

RELEASED
98.05.05 KE



	A	B	C	D
D2199−1	18.30	17.50	0.257	0.257
D2199−3	5.80	5.00	0.257	0.257
D2199−5	22.64	21.84	0.257	0.316
D2199−7	14.74	13.94	0.257	0.257
D2199−9	16.52	15.72	0.257	0.257
D2199−11	23.60	22.80	0.257	0.316
D2199−13	15.96	15.16	0.257	0.257
D2199−15	17.57	16.77	0.257	0.257
D2199−17	28.05	27.25	0.257	0.316
D2199−19	18.90	18.10	0.257	0.257
D2199−21	10.80	10.00	0.257	0.257
D2199−23	26.18	25.38	0.257	0.316
D2199−25	19.93	19.13	0.257	0.257
D2199−27	27.33	26.54	0.257	0.316
D2199−29	21.11	20.31	0.257	0.257

B B B C C D E E ip 00.10.13 ip 00.10.13

NOTES:
1. MAKE PER TEMPLATE DT2199−XX WHERE XX IS THE RESPECTIVE DASH NUMBER
2. MATERIAL: AISI 304/316 STAINLESS STEEL TUBE ø0.750 x 0.049 WALL
3. FINISH: POWDER COAT WHITE (43.52). PER DART QSI 005 43/E1

111586 M3
1401-17

Copyright 1993 by DART AEROSPACE LTD

DART AEROSPACE LTD

Description: Strut | Work Order: 111586

Inspection Drawing: D2565 | Rev: E1 | Part Number: D2199-1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
18.30	+/-.030	18.30	✓		T	SS-5
17.50	+/-.030	17.50	✓		T	SS-5

Measured by: DA 30 9-89	Checked By:	QC inspector: DAS 27 9-89	Engineering Approval *(if necessary*
Date 14/06/10	Date 14/06/10	Date 14/6/26	Date